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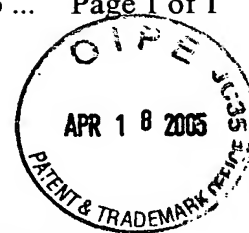
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APPENDIX A

FMC-1035

JAM/

National Occupational Exposure Survey (1981 - 1983)



Estimated Numbers of Employees Potentially Exposed to Specific Agents by Occupation*

Agent Name POLY(OXY(METHYL-1,2-ETHANEDIYL)), ALPHA-(2-AMINOMETHYLETHYL)-OMEGA-(2-AMINOMETHYLETHOXY)-
CAS # 9046-10-0
RTECS #
Agent Code X9732

Code	Occupation Description (1980)	Total # Employees (Male & Female)	Total # Female Employees
206	RADIOLOGIC TECHNICIANS	34	34
216	ENGINEERING TECHNICIANS, N.E.C.	61	
364	TRAFFIC, SHIPPING, AND RECEIVING CLERKS	96	96
453	JANITORS AND CLEANERS	1,663	1,327
519	MACHINERY MAINTENANCE OCCUPATIONS	31	31
563	BRICKMASONS AND STONEMASONS	108	
637	MACHINISTS	299	
659	MISCELLANEOUS PRECISION WOODWORKERS	60	
727	SAWING MACHINE OPERATORS	31	
756	MIXING AND BLENDING MACHINE OPERATORS	31	
759	PAINTING AND PAINT SPRAYING MACHINE OPERATORS	641	544
777	MISCELLANEOUS MACHINE OPERATORS, N.E.C.	1,142	362
785	ASSEMBLERS	1,286	840
794	HAND GRINDING AND POLISHING OCCUPATIONS	159	159
TOTAL		5,642	3,393

*(1) The estimates for each occupation apply across the surveyed industries in which the agent was observed. Not all industries were surveyed, and not all agents were observed in all surveyed industries.

(2) When using the estimates, standard errors associated with estimates should be considered. (3) Potential exposures to a chemical agent are categorized as actual (i.e., the surveyor observed the use of the specific agent) or tradename (i.e., the surveyor observed the use of a tradename product known to contain the specific agent). The estimates presented in the table combine both categories.

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APPENDIX B

McGraw-Hill Dictionary of Scientific and Technical Terms

Fifth Edition

Sybil P. Parker
Editor in Chief

McGraw-Hill, Inc.

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On the cover: Photomicrograph of crystals of vitamin B₁₂.
(Dennis Kunkel, University of Hawaii)

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In addition, material has been drawn from the following references: R. E. Hüsckke, *Glossary of Meteorology*, American Meteorological Society, 1959; *U.S. Air Force Glossary of Standardized Terms*, AF Manual 11-1, vol. 1, 1972; *Communications-Electronics Terminology*, AF Manual 11-1, vol. 3, 1970; W. H. Allen, ed., *Dictionary of Technical Terms for Aerospace Use*, 1st ed., National Aeronautics and Space Administration, 1965; J. M. Gilliland, *Solar-Terrestrial Physics: A Glossary of Terms and Abbreviations*, Royal Aircraft Establishment Technical Report 67158, 1967; *Glossary of Air Traffic Control Terms*, Federal Aviation Agency; *A Glossary of Range Terminology*, White Sands Missile Range, New Mexico; National Bureau of Standards, AD 467-424; *A DOD Glossary of Mapping, Charting and Geodetic Terms*, 1st ed., Department of Defense, 1967; P. W. Thrush, comp. and ed., *A Dictionary of Mining, Mineral, and Related Terms*, Bureau of Mines, 1968; *Nuclear Terms: A Glossary*, 2d ed., Atomic Energy Commission; F. Casey, ed., *Compilation of Terms in Information Sciences Technology*, Federal Council for Science and Technology, 1970; *Glossary of Stinfo Terminology*, Office of Aerospace Research, U.S. Air Force, 1963; *Naval Dictionary of Electronic, Technical, and Imperative Terms*, Bureau of Naval Personnel, 1962; *ADP Glossary*, Department of the Navy, NAVSO P-3097.

McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS, Fifth Edition

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orange-yellow radioactive secondary mineral; it is dimorphous with β -uranophane. Also known as uranotile. { yə'ran-ə, fān }
uranopilite [MINERAL] $(\text{UO}_2)_6(\text{SO}_4)(\text{OH})_{10} \cdot 12\text{H}_2\text{O}$ A bright yellow, lemon yellow, or golden yellow, monoclinic mineral consisting of a hydrated basic sulfate of uranium; occurs as encrustations and masses. { yū'rə-nō'pī,līt }

uranosphaerite [MINERAL] $\text{Bi}_2\text{O}_3 \cdot 2\text{UO}_3 \cdot 3\text{H}_2\text{O}$ An orange-yellow or brick red, orthorhombic mineral consisting of a hydrated oxide of bismuth and uranium. { yū'rə-nō'sfī,rīt }

uranosplinite [MINERAL] $\text{Ca}(\text{UO}_2)_2(\text{AsO}_4)_2 \cdot 8\text{H}_2\text{O}$ A lemon yellow to siskin green, tetragonal mineral consisting of a hydrated arsenate of calcium and uranium; occurs in tabular form. { yū'rə-nās'pə,nīt }

uranotantalite See samarskite. { yū'rə-nō'tant-əl,līt }

uranothorite [MINERAL] A uranium-bearing variety of thorite. { yū'rə-nō'thōr,līt }

uranotile See uranophane. { yə'ran-ə,tīl }

uranous-uranic oxide See triuranium octoxide. { 'yūr-ə-nās yə'ran-ik 'āks,īd }

Uranus [ASTRON] A planet, seventh in the order of distance from the sun; it has five known satellites, and its equatorial diameter is about four times that of the earth. { 'yūr-ə-nās yū'rā-nās }

uranyl acetate [INORG CHEM] $\text{UO}_2(\text{C}_2\text{H}_3\text{O}_2)_2 \cdot 2\text{H}_2\text{O}$ Poisonous, radioactive yellow crystals, decomposed by light; soluble in cold water, decomposes in hot water; loses water of crystallization at 110°C , decomposes at 275°C ; used in medicine and as an analytical reagent and bacterial oxidant. Also known as uranium acetate. { 'yūr-ə-nīl 'as-ə,tāt }

uranyl nitrate [INORG CHEM] $\text{UO}_2(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$ Toxic, explosive, unstable yellow crystals; soluble in water, alcohol, and ether; melts at 60°C and boils at 118°C ; used in photography, in medicine, and for uranium extraction and uranium glaze. Also known as uranium nitrate; yellow salt. { 'yūr-ə-nīl 'nī,trāt }

uranyl salts [INORG CHEM] Salts of UO_3 that ionize to form UO_2^{2+} and that are yellow in solution; for example, uranyl chloride, UO_2Cl_2 . { 'yūr-ə-nīl 'sōls }

uranyl sulfate [INORG CHEM] $\text{UO}_2\text{SO}_4 \cdot 3\frac{1}{2}\text{H}_2\text{O}$ and $\text{UO}_2\text{SO}_4 \cdot 3\text{H}_2\text{O}$ Poisonous, radioactive yellow crystals; soluble in water and concentrated hydrochloric acid; used as an analytical reagent. Also known as uranium sulfate. { 'yūr-ə-nīl 'sōl,fāt }

uranyl uranate See triuranium octoxide. { 'yūr-ə-nīl 'yūr-ə,nāt }

urao See trona. { 'yūr-ə, }
urate calculi [PATH] Kidney stones composed of uric acid salts and found particularly in people suffering from gout. { 'yūr-ə,t 'kalk-ya,lī }

urbacid [ORG CHEM] $\text{C}_7\text{H}_{15}\text{AsN}_2\text{S}_3$ A colorless, crystalline compound with a melting point of 144°C ; insoluble in water; used to control apple scale and diseases of coffee trees. { 'ər-bā,sīd }

urban geography [GEOGR] The study of the site, evolution, morphology, spatial patterns, and classification of densely populated areas. { 'ər-bən jē'āgrə-fē }

urban geology [GEOL] The study of geological aspects of planning and managing high-density population centers and their surroundings. { 'ər-bən jē'āl-ə-jē }

urban heat island [METEOROL] Increased urban temperatures of $1-2^\circ\text{C}$ higher for daily maxima and $1-9^\circ\text{C}$ for daily minima compared to rural environs resulting from changes in moisture balance due to impermeable surfaces, decreased humidity, or alteration in heat balance. { 'ər-bən hēt 'īl-ənd }

urbanization [CIV ENG] The state of being or becoming a community with urban characteristics. { 'ər-bā-nā'zā-shən }

urban renewal [CIV ENG] Redevelopment and revitalization of a deteriorated urban community. { 'ər-bən rī'nū-əl }

urban typhus See murine typhus. { 'ər-bən 'tī-fəs }

Urea process [ASTROPHYS] A series of nuclear reactions, chiefly among the iron group of elements, that are postulated as a cause of stellar collapse, due to the energy lost to neutrinos that are rapidly formed in the reactions. { 'ūr-ə,kə 'prā,ses }

urceolate [BIOL] Shaped like an urn. { 'ər,sē-ə-lāt }

urea [ORG CHEM] $\text{CO}(\text{NH}_2)_2$ A natural product of protein metabolism found in urine; synthesized as white crystals or powder with a melting point of 132.7°C ; soluble in water, alcohol, and benzene; used as a fertilizer, in plastics, adhesives, and flameproofing agents, and in medicine. Also known as carbamide. { yū'rē-ə }

urea anhydride See cyanamide. { yū'rē-ə an'hī,drīd }

urea dewaxing [CHEM ENG] A continuous, petroleum refinery process used to produce low-pour-point oils; urea forms a filterable solid complex (adduct) with the straight-chain wax paraffins in the stock. { yū'rē-ə dē'waks-īŋ }

urea-formaldehyde resin [ORG CHEM] A synthetic thermoset resin derived by the reaction of urea (carbamide) with formaldehyde or its polymers. Also known as urea resin. { yū'rē-ə fōr'mal-dē,hīd 'rez-ən }

urea nitrate [ORG CHEM] $\text{CO}(\text{NH}_2)_2 \cdot \text{HNO}_3$ Colorless, explosive, fire-hazardous crystals; soluble in alcohol, slightly soluble in water; decomposes at 152°C ; used in explosives and to make urethane. { yū'rē-ə 'nī,trāt }

urea peroxide [ORG CHEM] $\text{CO}(\text{NH}_2)_2 \cdot \text{H}_2\text{O}_2$ An unstable, fire-hazardous white powder; soluble in water, alcohol, and ethylene glycol; decomposes at $75-85^\circ\text{C}$ or by moisture; used as a source of water-free hydrogen peroxide, as a disinfectant, in cosmetics and pharmaceuticals, and for bleaching. { yū'rē-ə pə'rāk,sīd }

urea resin See urea-formaldehyde resin. { yū'rē-ə 'rez-ən }

urease [BIOCHEM] An enzyme that catalyzes the degradation of urea to ammonia and carbon dioxide; obtained from the seed of jack bean. { 'yūr-ē,ās }

Urechlinidae [INV ZOO] A family of echinoderms in the order Holasteroidea which have an ovoid test lacking a marginal fasciole. { yū'rē-ə'kīn-ə,dē }

Uredinales [MYCOL] An order of parasitic fungi of the subclass Heterobasidiomycetidae characterized by the teleutospore, a spore with one or more cells, each of which is a modified hypobasidium; members cause plant diseases known as rusts. { yū'rē-ən'ā-lēz }

uredinium [MYCOL] The aggregation of sporebearing hyphae and urediospores of a rust fungus that forms beneath the cuticle or epidermis of a host plant. { yū'rē-ə'dīn-ē-əm }

urediospore [MYCOL] A thin-walled spore produced by rust fungi; gives rise to a vegetative mycelium which may produce more urediospores. { yū'rē-ə'spōr }

urellite [GEOL] An achondritic stony meteorite consisting principally of olivine and clinobronzite, with some nickel-iron, troilite, diamond, and graphite. { yū'rē-ə,līt }

uremia [MED] A condition resulting from kidney failure and characterized by azotemia, chronic acidosis, anemia, and a variety of systemic signs and symptoms. { yū'rē-mē-ə }

ureotelic [BIOL] Referring to animals that produce urea as their main nitrogenous excretion. { yū'rē-ə'tel-ik }

ureter [ANAT] A long tube conveying urine from the renal pelvis to the urinary bladder or cloaca in vertebrates. { yūr-əd-ər }

urethane [ORG CHEM] $\text{CO}(\text{NH}_2)\text{OC}_2\text{H}_5$ A combustible, toxic, colorless powder; soluble in water and alcohol; melts at 49°C ; used as a solvent and chemical intermediate and in biochemical, research and veterinary medicine. Also known as ethyl carbamate; ethyl urethane. { 'yūr-ə,thān }

urethra [ANAT] The canal in most mammals through which urine is discharged from the urinary bladder to the outside. { yū'rē-thrə }

urethral gland [ANAT] One of the small, branched tubular mucous glands in the mucosa lining the urethra. { yū'rē-thrəl 'gland }

urethritis [MED] Inflammation of the urethra. { yū'rē-thrīd-əs }

ureyite [MINERAL] $\text{NaCrSi}_2\text{O}_6$ A meteoritic mineral of the pyroxene group. Also known as cosmochlor; kosmochlor. { 'yūr-ē,līt }

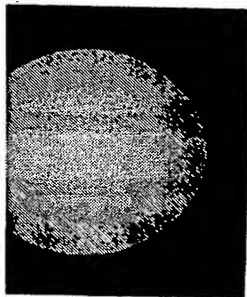
uric acid [BIOCHEM] $\text{C}_5\text{H}_4\text{N}_4\text{O}_3$ A white, crystalline compound, the excretory end product in amino acid metabolism by uricotelic species. { 'yūr-ik 'as-əd }

uricase [BIOCHEM] An enzyme present in the liver, spleen, and kidney of most mammals except humans; converts uric acid to allantoin in the presence of gaseous oxygen. { 'yūr-ə,kās }

uricotelism [PHYSIO] An adaptation of terrestrial reptiles and birds which effectively provides for detoxification of ammonia and also for efficient conservation of water due to a relatively low rate of glomerular filtration and active secretion of uric acid by the tubules to form a urine practically saturated with urate. { yū'rē-kād-əl-iz-əm }

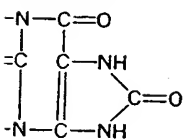
uridine [BIOCHEM] $\text{C}_9\text{H}_{12}\text{N}_2\text{O}_6$ A crystalline nucleoside composed of one molecule of uracil and one molecule of D-ribose; a component of ribonucleic acid. { 'yūr-ə,dīn }

URANUS



Typical appearance of Uranus, the earth is in the equatorial the globe.

URIC ACID



formula of uric acid.